

Reply to Office Action of October 9, 2007

REMARKS/ARGUMENTS

Claims 1, 3, 4 and 18-21 are pending in this application. By this Amendment, claims 1, 3 and 18 are amended, and claims 2, 17 and 22-28 are cancelled without prejudice or disclaimer. Independent claim 1 is amended to incorporate the subject matter of previously dependent claims 2 and 17 (now cancelled), and claims 3 and 18 are amended for dependency. Thus, it is respectfully submitted that the amendments to the claims do not raise new issues requiring further consideration and/or search.

The Examiner is thanked for the courtesies extended to Applicants' representative during the interview conducted on January 16, 2008. The substance of the interview, including any agreements reached, is reflected in the above amendments and the following remarks. Withdrawal of the rejections in view of the above amendments and the following remarks is respectfully requested.

Entry of the amended claims is proper under 37 C.F.R. §1.116 since the amendments: (1) place the application in condition for allowance, for the reasons discussed herein; (2) do not raise any new issues requiring further search and/or consideration, since the amendments amplify issues previously discussed throughout prosecution without incorporating additional subject matter and/or; (3) place the application in better form for appeal, if necessary. Entry is thus requested.

The Office Action rejects claims 1, 4 and 17-25 under 35 U.S.C. §102(b) over U.S. Patent No. 5,394,582 to Moon. Claims 17 and 22-25 have been cancelled. The rejection, in so far as it applies to claims 1, 4 and 18-21, is respectfully traversed.

Independent claim 1 is directed to an apparatus that controls a hot water wash cycle in a washing machine. The apparatus includes a controller that controls a water supply and a heater based on a sensing signal generated by a sensor. A water level at which the heater is completely submerged is a heating water level, and a desired fill level for the washing machine is a washing water level. The washing water level is greater than the heating water level. The controller turns the heater on as soon as the sensor senses that the water level in the washing machine is at the heating water level at which the heater is completely submerged. The water supply continues to supply water to the washing machine after the heater is turned on.

As discussed during the interview and as acknowledged in the Office Action, Moon neither discloses nor suggests such features, or the claimed combination of features.

It is noted that the features of claims 2 and 17 have been incorporated into independent claim 1. Broker, rather than Moon, is cited in the Office Action as allegedly teaching the features of claim 2 that are now included in independent claim 1. The allowability of independent claim 1 over Broker will be discussed below with respect to the rejection of the claims over Broker.

Further, as discussed during the interview and as set forth in previous replies with respect to Moon, Moon clearly discloses that the controller 20 does not turn the heater 2 on until after a

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desired fill level is reached and the water supply drive portion 28 has shut off the supply of wash water to the tub 1 of the washing machine. There is nothing in Moon's disclosure that suggests the heater 2 could or should be turned on at any point while wash water is being supplied to the tub 1, and a level of submersion of the heater 2 has no effect on when the heater 2 is turned on in Moon's washing machine. Moon neither discloses nor suggests that the controller 20 monitors two different water levels, and in particular, a heating water level at which the heater is completely submerged, and a washing water level at which a desired fill level is reached, nor that the controller 20 controls the heater 2 based on such water levels. Further, Moon neither discloses nor suggests that the controller 20 turns the heater 2 on as soon as the water level in the tub 1 is at such a heating water level (level at which the heater 2 would be completely submerged), nor that the water supply drive portion 28 continues to supply water to the tub 1 after the heater 2 is turned on, as recited in independent claim 1.

Accordingly, it is respectfully submitted that independent claim 1 is allowable over Moon, and thus the rejection of independent claim 1 under 35 U.S.C. §102(b) over Moon should be withdrawn. Dependent claims 18-21 are allowable at least for the reasons set forth above with respect to independent claim 1, from which they depend, as well as for their added features.

The Office Action rejects claims 1, 2, 4 and 17-25 under 35 U.S.C. §102(e), or, in the alternative, under 35 U.S.C. §103(a), over U.S. Patent No. 6,553,594 to Broker et al. Claims 2, 17 and 22-25 have been cancelled. The rejection, in so far as it applies to claims 1, 4 and 18-21, is respectfully traversed.

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The features of independent claim 1 are set forth above. Broker neither discloses nor suggests such features, or the claimed combination of features.

Broker discloses a control system for a washing machine 2. During normal operation, hot/warm/cold wash water is supplied at whatever temperature is available from an external source, and a heater 170 remains deactivated, regardless of a selected cycle. The heater 170 is only operated during a stain cycle, and only until a temperature of the water reaches a target temperature as determined by a temperature sensor 172, and is then deactivated. Broker is silent as to when, during the filling process, the heater 170 is turned on, and what mechanism, other than the selection of the stain cycle, causes the heater 170 to be turned on.

Broker neither discloses nor suggests that the sensor 172 monitors two different water levels, and in particular, a heating water level at which the heater 170 is completely submerged, and a washing water level at which a desired fill level is reached, nor that the heater 170 is controlled based on such water levels. Further, Broker necessarily neither discloses nor suggests that the heater 170 is turned on as soon as the water level in the tub 1 reaches such a heating water level (level at which the heater 170 would be completely submerged), nor that water continues to be supplied after the heater 170 is turned on, as recited in independent claim 1. Further, Broker neither discloses nor suggests that the heater 170 could be operated in this manner, nor that it would be in any way advantageous to operate the heater 170 in this manner.

With respect to the rejection of the claims under §102 over Broker, it is clear that Broker fails to disclose a controller for its washing machine which controls the water supply and heater

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such that the heater is turned on when the sensor senses that the heater completely submerged, and wherein the water supply continues to supply water to the washing machine after the heater is turned on. In order for Broker to anticipate claims for citing these features, Broker would have to disclose that the controller of the Broker washing machine operates as claimed. The fact that the controller in the Broker washing machine could be reprogrammed to accomplish this function is not sufficient.

Further, with respect to the argument that it would have been obvious to modify the Broker washing machine to accomplish the functions recited in the pending claims, it is respectfully submitted that such a modification of Broker would not have been obvious for one of ordinary skill in the art. Broker makes no suggestion that it would be advantageous to operate the Broker washing machine as claimed. The only motivation for modifying the Broker washing machine to operate as claimed comes from Applicants' own invention, and thus requires the impermissible use of hindsight. Because it requires the impermissible use of hindsight, in view of Applicants' own invention, to find a motivation to modify Broker so that it operates as claimed, it is respectfully submitted that the rejection under §103 is also improper and should be withdrawn.

Accordingly, it is respectfully submitted that independent claim 1 is allowable over Broker, and thus the rejection of independent claim 1 under 35 U.S.C. §102(e), or, in the alternative, under 35 U.S.C. §103(a), over Broker should be withdrawn. Dependent claims 4 and

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18-21 are allowable at least for the reasons set forth above with respect to independent claim 1, from which they depend, as well as for their added features.

The Office Action rejects claims 3 and 26-28 under 35 U.S.C. §103(a) over Broker. Claims 26-28 have been cancelled. The rejection, in so far as it applies to claim 3, is respectfully traversed.

Dependent claim 3 is allowable over Broker at least for the reasons set forth above with respect to independent claim 1, from which it depends, as well as for its added features. Further, it is respectfully submitted that, as set forth above, the features of claim 3 would not have been obvious based on Broker's disclosure. Accordingly, it is respectfully submitted that claim 3 is allowable over Broker, and thus the rejection of claim 3 under 35 U.S.C. §103(a) over Broker should be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned, Joanna K. Mason, at the telephone number listed below.

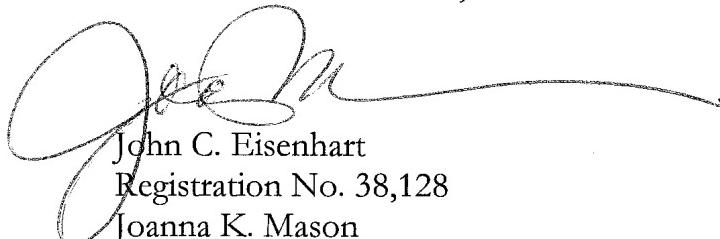
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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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